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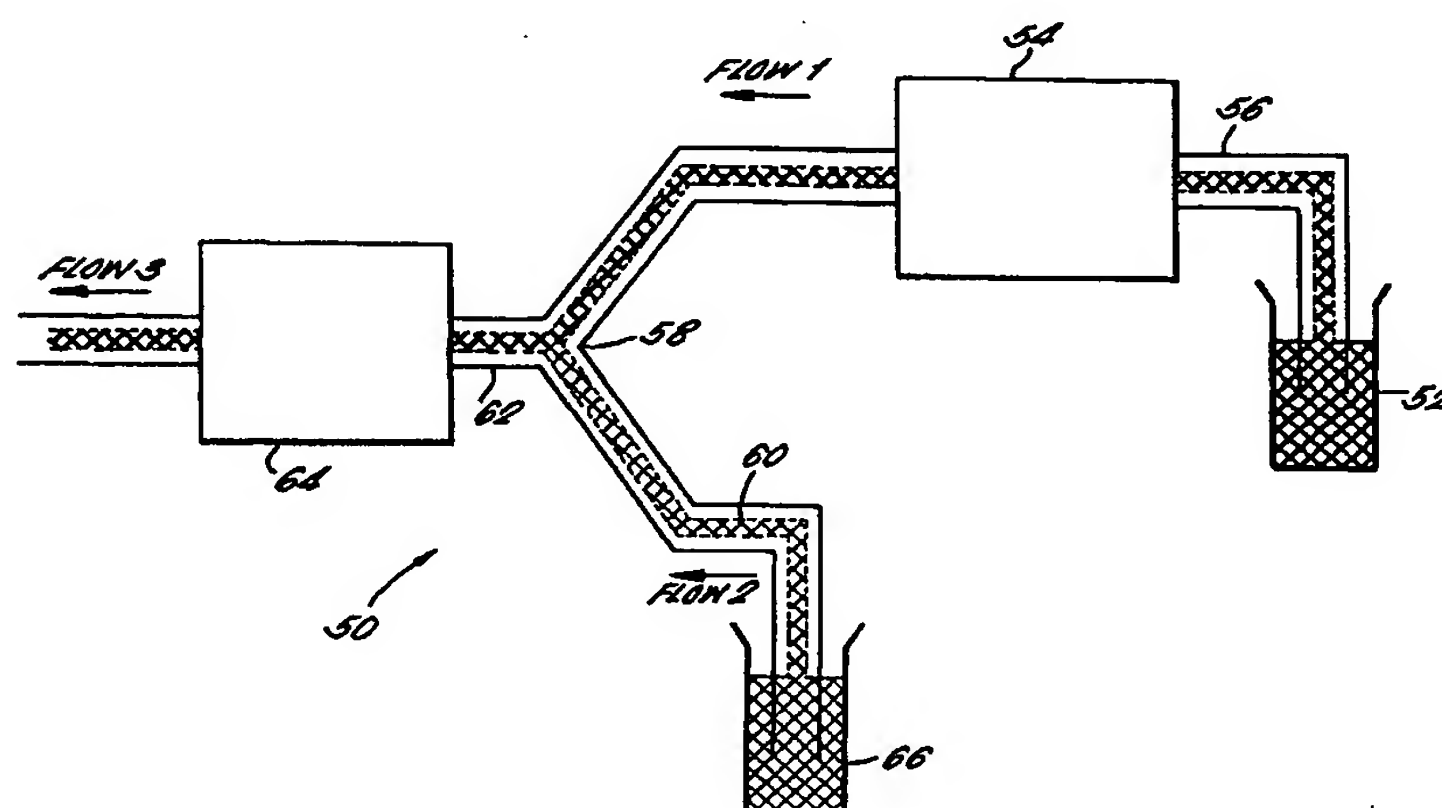
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(54) Title: **DEVICE AND METHOD FOR DILUTING A SAMPLE**



(57) **Abstract:** The present invention provides a pump device (50) which is usable to dilute a sample (52) before analysis. A first pump (54) pumps the sample to a mixing region (58) where it mixes with a diluent (66). A second pump (64) pumps the diluted sample to the analysis instrument. The flow of the diluent to the mixer is equal to the difference of the flow of the sample to the mixer and the flow of the diluted sample to the instrument. Pumps (54) and (64) are independently controllable by a controller unit which is arranged so that data from the instrument can be used to determine the dilution factor of the sample. Thus, the controller can control this dilution factor in real time, upon receipt of such data from the instrument, by change either one of (or both) the pump's flow rate.

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